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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Wed Jun 13 13:43:27 EDT 2007

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\*\*\*\*\*

Reviewer Comments:

<210> 125

<211> 20

<212> PRT

<213> Clostridium botulinum serotype D

<220>

<221> CONFLICT

<222> (1)...(20)

<223>

Variant of amino-terminal 30 amino acids of LC

Please move the above text to the <223> line, since it is the <223> response. Same error in Seq. 128.

\*\*\*\*\*

Application No: 10757077

Version No: 4.0

**Input Set:****Output Set:****Started:** 2007-05-24 17:14:54.323**Finished:** 2007-05-24 17:14:58.486**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 163 ms**Total Warnings:** 23**Total Errors:** 25**No. of SeqIDs Defined:** 148**Actual SeqID Count:** 148

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (24)

**Input Set:**

**Output Set:**

**Started:** 2007-05-24 17:14:54.323  
**Finished:** 2007-05-24 17:14:58.486  
**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 163 ms  
**Total Warnings:** 23  
**Total Errors:** 25  
**No. of SeqIDs Defined:** 148  
**Actual SeqID Count:** 148

Error code	Error Description
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E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (26)
E 201	Mandatory field data missing in <223> in SEQ ID (125)
E 201	Mandatory field data missing in <223> in SEQ ID (128)
W 213	Artificial or Unknown found in <213> in SEQ ID (136)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (136)
W 213	Artificial or Unknown found in <213> in SEQ ID (137)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (137)
W 213	Artificial or Unknown found in <213> in SEQ ID (138)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (138)
W 213	Artificial or Unknown found in <213> in SEQ ID (139)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (139)
W 213	Artificial or Unknown found in <213> in SEQ ID (140)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (140)
W 213	Artificial or Unknown found in <213> in SEQ ID (141)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (141)
W 213	Artificial or Unknown found in <213> in SEQ ID (142)

**Input Set:**

**Output Set:**

**Started:** 2007-05-24 17:14:54.323  
**Finished:** 2007-05-24 17:14:58.486  
**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 163 ms  
**Total Warnings:** 23  
**Total Errors:** 25  
**No. of SeqIDs Defined:** 148  
**Actual SeqID Count:** 148

Error code	Error Description
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E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (144)
W 213	Artificial or Unknown found in <213> in SEQ ID (145) This error has occurred more than 20 times, will not be displayed
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (145) This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Steward, Lance E.

Fernandez-Salas, Ester

Herrington, Todd

Aoki, Kei Roger

<120> Clostridial Neurotoxin Compositions and

Modified Clostridial Neurotoxins

<130> 17355CIP3 (BOT)

<140> 10757077

<141> 2004-01-14

<150> US 10/757,077

<151> 2004-01-14

<150> US 09/910,346

<151> 2001-07-20

<150> US 09/620,840

<151> 2000-07-21

<150> US 10/163,106

<151> 2003-06-04

<160> 148

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 7

<212> PRT

<213> Clostridium botulinum serotype A

<400> 1

Phe Glu Phe Tyr Lys Leu Leu

1 5

<210> 2

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 2

Glu Glu Lys Arg Ala Ile Leu

1 5

<210> 3

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 3  
Glu Glu Lys Met Ala Ile Leu  
1 5

<210> 4  
<211> 7  
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Ser Glu Arg Asp Val Leu Leu  
1 5

<210> 5  
<211> 7  
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<213> Rattus norvegicus

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Val Asp Thr Gln Val Leu Leu  
1 5

<210> 6  
<211> 7  
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<213> Mus musculus

<400> 6  
Ala Glu Val Gln Ala Leu Leu  
1 5

<210> 7  
<211> 7  
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<210> 8  
<211> 7  
<212> PRT  
<213> Gallus gallus

<400> 8  
Ser Asp Arg Gln Asn Leu Ile  
1 5

<210> 9

<211> 7  
<212> PRT  
<213> *Ovis aries*

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1 5

<210> 10  
<211> 7  
<212> PRT  
<213> *Homo sapiens*

<400> 10  
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1 5

<210> 11  
<211> 7  
<212> PRT  
<213> *Homo sapiens*

<400> 11  
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1 5

<210> 12  
<211> 7  
<212> PRT  
<213> *Homo sapiens*

<400> 12  
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1 5

<210> 13  
<211> 7  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 13  
Asn Glu Gln Ser Pro Leu Leu  
1 5

<210> 14  
<211> 12  
<212> PRT  
<213> *Clostridium botulinum* serotype A

<400> 14  
Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp  
1 5 10

<210> 15  
<211> 11  
<212> PRT  
<213> Clostridium botulinum serotype A  
  
<400> 15  
Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp  
1 5 10

<210> 16  
<211> 4  
<212> PRT  
<213> Clostridium botulinum serotype A  
  
<400> 16  
Met Tyr Lys Asp  
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<210> 17  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (1)...(7)  
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<221> VARIANT  
<222> (1)...(1)  
<223> Xaa is any amino acid.

<221> VARIANT  
<222> (3)...(5)  
<223> Xaa is any amino acid.

<400> 17  
Xaa Asp Xaa Xaa Xaa Leu Leu  
1 5

<210> 18  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
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<223> Consensus sequence for Leucine-based motif.

<221> VARIANT  
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<223> Xaa is any amino acid.

<221> VARIANT

<222> (3)...(5)

<223> Xaa is any amino acid.

<400> 18

Xaa Glu Xaa Xaa Xaa Leu Leu

1 5

<210> 19

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (1)...(7)

<223> Consensus sequence for Leucine-based motif.

<221> VARIANT

<222> (1)...(1)

<223> Xaa is any amino acid.

<221> VARIANT

<222> (3)...(5)

<223> Xaa is any amino acid.

<400> 19

Xaa Asp Xaa Xaa Xaa Leu Ile

1 5

<210> 20

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (1)...(7)

<223> Consensus sequence for Leucine-based motif.

<221> VARIANT

<222> (1)...(1)

<223> Xaa is any amino acid.

<221> VARIANT

<222> (3)...(5)

<223> Xaa is any amino acid.

<400> 20

Xaa Asp Xaa Xaa Xaa Leu Met

1 5

<210> 21  
<211> 7  
<212> PRT  
<213> Artificial Sequence

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<223> Consensus sequence for Leucine-based motif.

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<223> Xaa is any amino acid.

<221> VARIANT  
<222> (3)...(5)  
<223> Xaa is any amino acid.

<400> 21  
Xaa Glu Xaa Xaa Xaa Leu Ile  
1 5

<210> 22  
<211> 7  
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<220>  
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<223> Consensus sequence for Leucine-based motif.

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<223> Xaa is any amino acid.

<221> VARIANT  
<222> (3)...(5)  
<223> Xaa is any amino acid.

<400> 22  
Xaa Glu Xaa Xaa Xaa Ile Leu  
1 5

<210> 23  
<211> 7  
<212> PRT  
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<220>  
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<223> Consensus sequence for Leucine-based motif.

<221> VARIANT

<222> (1)...(1)  
<223> Xaa is any amino acid.

<221> VARIANT  
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<223> Xaa is any amino acid.

<400> 23  
Xaa Glu Xaa Xaa Xaa Leu Met  
1 5

<210> 24  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (1)...(4)  
<223> Consensus sequence for Tyrosine-based motif.

<221> VARIANT  
<222> (2)...(3)  
<223> Xaa is any amino acid.

<221> VARIANT  
<222> (4)...(4)  
<223> Xaa is any hydrophobic amino acid.

<400> 24  
Tyr Xaa Xaa Xaa  
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<210> 25  
<211> 50  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)...(50)  
<223> Peptide comprising a 6x His tag and S-tag

<400> 25  
Met His His His His His His Ser Ser Gly Leu Val Pro Arg Gly Ser  
1 5 10 15  
Gly Met Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln His Met Asp  
20 25 30  
Ser Pro Asp Leu Gly Thr Asp Asp Asp Asp Lys Ala Met Tyr Lys Asp  
35 40 45  
Pro Val  
50

<210> 26

<211> 14  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <221> PEPTIDE  
 <222> (1)...(14)  
 <223> Peptide comprising a 6x His tag  
  
 <400> 26  
 Asn Phe Thr Lys Leu Thr Arg Ala His His His His His  
 1 5 10

<210> 27  
 <211> 8  
 <212> PRT  
 <213> Clostridium botulinum serotype A

<400> 27  
 Pro Phe Val Asn Lys Gln Phe Asn  
 1 5

<210> 28  
 <211> 22  
 <212> PRT  
 <213> Clostridium botulinum serotype A

<400> 28  
 Lys Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg  
 1 5 10 15  
 Gly Ile Ile Thr Ser Lys  
 20

<210> 29  
 <211> 438  
 <212> PRT  
 <213> Clostridium botulinum serotype A

<400> 29  
 Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly  
 1 5 10 15  
 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro  
 20 25 30  
 Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg  
 35 40 45  
 Asp Thr Phe Thr Asn Pro Glu Glu Gly Asp Leu Asn Pro Pro Pro Glu  
 50 55 60  
 Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr  
 65 70 75 80  
 Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu  
 85 90 95  
 Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val  
 100 105 110  
 Arg Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys

115	120	125
Val Ile Asp Thr Asn Cys	Ile Asn Val Ile Gln Pro	Asp Gly Ser Tyr
130	135	140
Arg Ser Glu Glu Leu Asn	Leu Val Ile Ile Gly Pro	Ser Ala Asp Ile
145	150	155
Ile Gln Phe Glu Cys Lys	Ser Phe Gly His Glu Val	Leu Asn Leu Thr
165	170	175
Arg Asn Gly Tyr Gly Ser	Thr Gln Tyr Ile Arg Phe	Ser Pro Asp Phe
180	185	190
Thr Phe Gly Phe Glu Glu	Ser Leu Glu Val Asp Thr	Asn Pro Leu Leu
195	200	205
Gly Ala Gly Lys Phe Ala	Thr Asp Pro Ala Val Thr	Leu Ala His Glu
210	215	220
Leu Ile His Ala Gly His	Arg Leu Tyr Gly Ile Ala	Ile Asn Pro Asn
225	230	235
Arg Val Phe Lys Val Asn	Thr Asn Ala Tyr Tyr Glu	Met Ser Gly Leu
245	250	255
Glu Val Ser Phe Glu Glu	Leu Arg Thr Phe Gly Gly	His Asp Ala Lys
260	265	270
Phe Ile Asp Ser Leu Gln	Glu Asn Glu Phe Arg Leu	Tyr Tyr Tyr Asn
275	280	285
Lys Phe Lys Asp Ile Ala	Ser Thr Leu Asn Lys Ala	Lys Ser Ile Val
290	295	300
Gly Thr Thr Ala Ser Leu	Gln Tyr Met Lys Asn Val	Phe Lys Glu Lys
305	310	315
Tyr Leu Leu Ser Glu Asp	Thr Ser Gly Lys Phe Ser	Val Asp Lys Leu
325	330	335
Lys Phe Asp Lys Leu Tyr	Lys Met Leu Thr Glu Ile	Tyr Thr Glu Asp
340	345	350
Asn Phe Val Lys Phe Phe	Lys Val Leu Asn Arg Lys	Thr Tyr Leu Asn
355	360	365
Phe Asp Lys Ala Val Phe	Lys Ile Asn Ile Val Pro	Lys Val Asn Tyr
370	375	380
Thr Ile Tyr Asp Gly Phe	Asn Leu Arg Asn Thr Asn	Leu Ala Ala Asn
385	390	395
Phe Asn Gly Gln Asn Thr	Glu Ile Asn Asn Met Asn	Phe Thr Lys Leu
405	410	415
Lys Asn Phe Thr Gly Leu	Phe Glu Phe Tyr Lys Leu	Leu Cys Val Arg
420	425	430
Gly Ile Ile Thr Ser Lys		
435		

<210> 30

<211> 441

<212> PRT

<213> Clostridium botulinum sertotype B

<400> 30

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1	5	10
Asn Asn Ile Ile Met Met	Glu Pro Pro Phe Ala	Arg Gly Thr Gly Arg
20	25	30
Tyr Tyr Lys Ala Phe Lys	Ile Thr Asp Arg Ile Trp	Ile Ile Pro Glu
35	40	45
Arg Tyr Thr Phe Gly Tyr	Lys Pro Glu Asp Phe Asn	Lys Ser Ser Gly
50	55	60

Ile	Phe	Asn	Arg	Asp	Val	Cys	Glu	Tyr	Tyr	Asp	Pro	Asp	Tyr	Leu	Asn	65	70	75	80
Thr	Asn	Asp	Lys	Lys	Asn	Ile	Phe	Leu	Gln	Thr	Met	Ile	Lys	Leu	Phe	85	90	95	
Asn	Arg	Ile	Lys	Ser	Lys	Pro	Leu	Gly	Glu	Lys	Leu	Leu	Glu	Met	Ile	100	105	110	
Ile	Asn	Gly	Ile	Pro	Tyr	Leu	Gly	Asp	Arg	Arg	Val	Pro	Leu	Glu	Glu	115	120	125	
Phe	Asn	Thr	Asn	Ile	Ala	Ser	Val	Thr	Val	Asn	Lys	Leu	Ile	Ser	Asn	130	135	140	
Pro	Gly	Glu	Val	Glu	Arg	Lys	Lys	Gly	Ile	Phe	Ala	Asn	Leu	Ile	Ile	145	150	155	160
Phe	Gly	Pro	Gly	Pro	Val	Leu	Asn	Glu	Asn	Glu	Thr	Ile	Asp	Ile	Gly	165	170	175	
Ile	Gln	Asn	His	Phe	Ala	Ser	Arg	Glu	Gly	Phe	Gly	Gly	Ile	Met	Gln	180	185	190	
Met	Lys	Phe	Cys	Pro	Glu	Tyr	Val	Ser	Val	Phe	Asn	Asn	Val	Gln	Glu	195	200	205	
Asn	Lys	Gly	Ala	Ser	Ile	Phe	Asn	Arg	Arg	Gly	Tyr	Phe	Ser	Asp	Pro	210	215	220	
Ala	Leu	Ile	Leu	Met	His	Glu	Leu	Ile	His	Val	Leu	His	Gly	Leu	Tyr	225	230	235	240
Gly	Ile	Lys	Val	Asp	Asp	Leu	Pro	Ile	Val	Pro	Asn	Glu	Lys	Lys	Phe	245	250	255	
Phe	Met	Gln	Ser	Thr	Asp	Ala	Ile	Gln	Ala	Glu	Glu	Leu	Tyr	Thr	Phe	260	265	270	
Gly	Gly	Gln	Asp	Pro	Ser	Ile	Ile	Thr	Pro	Ser	Thr	Asp	Lys	Ser	Ile	275	280	285	
Tyr	Asp	Lys	Val	Leu	Gln	Asn	Phe	Arg	Gly	Ile	Val	Asp	Arg	Leu	Asn	290	295	300	
Lys	Val	Leu	Val	Cys	Ile	Ser	Asp	Pro	Asn	Ile	Asn	Ile	Asn	Ile	Tyr	305	310	315	320
Lys	Asn	Lys	Phe	Lys	Asp	Lys	Tyr	Lys	Phe	Val	Glu	Asp	Ser	Glu	Gly	325	330	335	
Lys	Tyr	Ser	Ile	Asp	Val	Glu	Ser	Phe	Asp	Lys	Leu	Tyr	Lys	Ser	Leu	340	345	350	
Met	Phe	Gly	Phe	Thr	Glu	Thr	Asn	Ile	Ala	Glu	Asn	Tyr	Lys	Ile	Lys	355	360	365	
Thr	Arg	Ala	Ser	Tyr	Phe	Ser	Asp	Ser	Leu	Pro	Pro	Val	Lys	Ile	Lys	370	375	380	
Asn	Leu	Leu	Asp	Asn	Glu	Ile	Tyr	Thr	Ile	Glu	Glu	Gly	Phe	Asn	Ile	385	390	395	400
Ser	Asp	Lys	Asp	Met	Glu	Lys	Glu	Tyr	Arg	Gly	Gln	Asn	Lys	Ala	Ile	405	410	415	
Asn	Lys	Gln	Ala	Tyr	Glu	Glu	Ile	Ser	Lys	Glu	His	Leu	Ala	Val	Tyr	420	425	430	
Lys	Ile	Gln	Met	Cys	Lys	Ser	Val	Lys								435	440		

<210> 31

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 31

Tyr Ile Lys Ile

1

<210> 32

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 32

Tyr Asp Ser Thr

1

<210> 33

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 33

Tyr Gly Ser Thr

1

<210> 34

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 34

Tyr Asn Lys Phe

1

<210> 35

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 35

Tyr Met Lys Asn

1

<210> 36

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

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<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 36

Tyr Leu Asn Phe

1

<210> 37

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 37

Tyr Asp Gly Phe

1

<210> 38

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 38

Tyr Lys Leu Leu

1

<210> 39



<211> 30  
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 <213> Clostridium botulinum serotype A  
  
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 <222> (1)...(30)  
 <223> Amino terminal 30 amino acids of light chain  
  
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 Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly  
 1 5 10 15  
 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met  
 20 25 30

<210> 40  
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 <222> (1)...(50)  
 <223> Carboxyl terminal 50 amino acids of light chain  
  
 <400> 40  
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 1 5 10 15  
 Asn Thr Glu Ile Asn Asn Met Asn Phe Thr Lys Leu Lys Asn Phe Thr  
 20 25 30  
 Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg Gly Ile Ile Thr  
 35 40 45  
 Ser Lys  
 50

<210> 41  
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 <222> (13)...(30)  
 <223> Amino terminal 30 amino acids of light chain  
  
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 Met Pro Val Thr Ile Asn Asn Phe Asn Tyr Asn Asp Pro Ile Asp Asn  
 1 5 10 15  
 Asp Asn Ile Ile Met Met Glu Pro Pro Phe Ala Arg Gly Thr  
 20 25 30

<210> 42  
 <211> 50  
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<213> Clostridium botulinum serotype B

<220>

<221> DOMAIN

<222> (1)...(50)

<223> Carboxyl terminal 50 amino acids of light chain

<400> 42

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Glu	Tyr	Arg	Gly	Gln	Asn	Lys	Ala	Ile	Asn	Lys	Gln	Ala	Tyr	Glu	Glu
			20					25					30		
Ile	Ser	Lys	Glu	His	Leu	Ala	Val	Tyr	Lys	Ile	Gln	Met	Cys	Lys	Ser